Chapter 12 Planning Chart: Probability

Cross-Curricular Competency: Solves problems. Lesson 3 provides students with another method by which they can solve certain kinds of problems. Students can apply this method to solve problems in other areas in addition to mathematics.

Broad Area of Learning: Media Literacy. Students are exposed to statements about probability in all forms of media. Lesson 1 and Lesson 4 provide contexts (sports and biology) through which a discussion of the use of probability in the media can be undertaken.

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes
Getting Started: Lucky 7, pp. 410–411			Assessment Opportunity

Lesson 1: Exploring Probability, pp. 412–413	*Probability: Random Experiment*
	• Random experiment
	  • Random experiments involving one or more steps (with or without replacement, with or without order)
	  • Outcome of a random experiment
	• Event
	  • Simple, complementary, compatible, incompatible, dependent and independent events
	• Theoretical probability and experimental probability
		Probability: Processing Data From Random Experiments
		• Calculating the probability of an event	

Lesson 2: Calculating Probability, pp. 414–417	*Probability: Random Experiment*
	• Random experiment
	  • Random experiments involving one or more steps (with or without replacement, with or without order)
	  • Outcome of a random experiment
	• Event
	  • Simple, complementary, compatible, incompatible, dependent and independent events
	• Theoretical probability and experimental probability
		Probability: Processing Data From Random Experiments
		• Calculating the probability of an event	

Mid-Chapter Review: pp. 418–419			Assessment Opportunity

Curious Math: Simpson's Paradox, p. 420	*Probability: Random Experiment*
	• Random experiment
	  • Random experiments involving one or more steps (with or without replacement, with or without order)
	  • Outcome of a random experiment
	• Event
	  • Simple, complementary, compatible, incompatible, dependent and independent events
	• Theoretical probability and experimental probability
		Probability: Processing Data From Random Experiments
		• Calculating the probability of an event
			Optional

Math Game: Unlucky Ones, p. 421			Optional

Lesson 3: Solving Problems Using Organized Lists, pp. 422–425	*Probability: Random Experiment*
	• Random experiment
	  • Random experiments involving one or more steps (with or without replacement, with or without order)
	  • Outcome of a random experiment
	• Theoretical probability and experimental probability
		Probability: Processing Data From Random Experiments
		• Enumerating possibilities using different types of representations: tree diagram, network, table, etc.
		• Calculating the probability of an event	

Content	QEP Concepts	QEP Processes	Addressing Concepts and Processes

Lesson 4: Using Tree Diagrams to Calculate Probability, pp. 426–429	*Probability: Random Experiment*
	• Random experiment
	  • Random experiments involving one or more steps (with or without replacement, with or without order)
	  • Outcome of a random experiment
	• Theoretical probability and experimental probability
		Probability: Processing Data From Random Experiments
		• Enumerating possibilities using different types of representations: tree diagram, network, table, etc.
		• Calculating the probability of an event
			Teaching and Learning: Introduce the term *network* as another name for the tree diagram in Examples 3 and 4.

Lesson 5: Applying Probabilities, pp. 430–433	*Probability: Random Experiment*
	• Random experiment
	  • Random experiments involving one or more steps (with or without replacement, with or without order)
	  • Outcome of a random experiment
	• Theoretical probability and experimental probability
		Probability: Processing Data From Random Experiments
		• Enumerating possibilities using different types of representations: tree diagram, network, table, etc.
		• Calculating the probability of an event	

Mental Math: Expressing a Fraction as a Percent, p. 433	*Arithmetic: Number Sense With Regard to Decimal and Fractional Notation and Operation Sense* • Reading, writing, various representations, patterns, properties • Fractional, decimal and exponential (integral exponent) notation; percentage, square root	*Arithmetic: Different Ways of Writing and Representing Numbers* • Recognizing and using equivalent ways of writing numbers: • Equivalent fractions • Switching from one way of writing numbers to another or from one type of representation to another *Arithmetic: Operations Involving Numbers Written in Decimal and Fractional Notation* • Looking for equivalent expressions • Mental computation: the four operations, especially with numbers written in decimal notation, using equivalent ways of writing numbers and the properties of operations	
Chapter Self-Test: p. 434			Self-Assessment Opportunity
Chapter Review: pp. 435–436			Assessment Opportunity

Chapter Task: Rock, Paper, Scissors, p. 437	*Probability: Random Experiment*
	• Random experiment
	  • Random experiments involving one or more steps (with or without replacement, with or without order)
	  • Outcome of a random experiment
	• Theoretical probability and experimental probability
		Probability: Processing Data From Random Experiments
		• Calculating the probability of an event
			Assessment Opportunity

Chapters 10–12 Cumulative Review: pp. 438–439			Assessment Opportunity Choose from Questions 1, 5–9, 10a), c)–f).